

WHAT IS CLAIMED IS:

1. A tissue bonding article, comprising:
a flexible material;
an adhesive substance applied over at least a portion of a bottom side of said flexible material; and
a polymerizable adhesive composition permeated throughout at least a portion of said flexible material.
2. The article of claim 1, wherein said flexible material is a mesh.
3. The article of claim 1, wherein said flexible material comprises perforations or tear lines.
4. The article of claim 1, wherein said flexible material is flexible and porous.
5. The article of claim 1, wherein said flexible material is substantially free of elastin.
6. The article of claim 1, wherein said flexible material is elastic.
7. The article of claim 1, wherein said adhesive substance is applied over a first and a second portion of said flexible material.
8. The article of claim 7, wherein said first and second portions are located substantially at opposite ends of said flexible material.
9. The article of claim 7, wherein said first and second portions do not cover an entire surface area of said flexible material.
10. The article of claim 7, wherein said flexible material comprises perforations or tear lines proximate to said first and second portions.
11. The article of claim 1, wherein said adhesive substance is a pressure sensitive adhesive.
12. The article of claim 11, wherein said pressure sensitive adhesive has a weaker bonding strength than said polymerizable adhesive composition.
13. The article of claim 1, wherein said adhesive substance does not interact with said polymerizable adhesive composition.
14. The article of claim 1, wherein said polymerizable adhesive composition is a monomeric composition.
15. The article of claim 1, wherein said polymerizable adhesive composition is polymerized.

16. The article of claim 1, wherein said polymerizable adhesive composition comprises a 1,1-disubstituted monomer.
17. The article of claim 1, wherein said polymerizable adhesive composition comprises a cyanoacrylate monomer.
18. The article of claim 1, wherein said polymerizable adhesive composition, after polymerization, substantially covers surfaces on at least said bottom side and a top side of said flexible material.
19. The article of claim 18, wherein said polymerizable adhesive composition, after polymerization, substantially does not cover said adhesive substance.
20. The article of claim 1, further comprising a polymerization initiator or rate modifier for said polymerizable adhesive composition disposed in or on said flexible material.
21. The article of claim 20, wherein said polymerization initiator or rate modifier is immobilized on said flexible material.
22. The article of claim 1, further comprising a bioactive material disposed in or on said flexible material.
23. The article of claim 22, wherein said bioactive material is not immobilized on said flexible material, but is soluble or dispersible in said polymerizable adhesive composition.
24. The article of claim 1, wherein the flexible material is biodegradable.
25. The article of claim 1, wherein the flexible material is not biodegradable.
26. The article of claim 1, wherein the flexible material and the polymerizable adhesive composition are together biodegradable.
27. The article of claim 1, wherein the flexible material and the polymerizable adhesive composition are together not biodegradable.
28. The article of claim 1, wherein the article is opaque.
29. The article of claim 1, wherein the article is translucent.
30. The article of claim 1, wherein said adhesive substance is applied over substantially the entire bottom side of said flexible material.
31. The article of claim 30, wherein said adhesive substance is permeated by said polymerizable adhesive composition.

32. The article of claim 30, wherein said flexible substrate not include features that penetrate an underlying substrate during use.

33. The article of claim 1, further comprising one or more adhesive strips attached to the flexible material, wherein the adhesive substance is provided on the one or more adhesive strips.

34. A method of bonding tissue, comprising:
placing a flexible substrate over a section of tissue, wherein said flexible substrate comprises a flexible material and an adhesive substance applied over at least a portion of a bottom side of said flexible material;
applying a polymerizable adhesive composition over and substantially covering at least a portion of the flexible substrate; and
allowing the polymerizable adhesive composition to permeate into and under the flexible substrate and polymerize to form a composite structure bonded to said tissue.

35. The method of claim 34, wherein said section of tissue includes a wound to be closed.

36. The method of claim 35, wherein said placing comprises:
fixing a first portion of said flexible substrate to said section of tissue on a first side of said wound;
approximating edges of said wound; and
fixing a second portion of said flexible substrate to said section of tissue on a second of said wound opposite said first side of said wound.

37. The method of claim 36, further comprising removing said first and second portions of said flexible substrate.

38. The method of claim 37, wherein a third portion of said flexible substrate remains, covering said wound.

39. The method of claim 37, wherein said removing comprises trimming said first and second portions of said flexible substrate.

40. The method of claim 35, wherein said placing comprises:
fixing a first lengthwise end of said flexible substrate to said section of tissue on a first lengthwise end of said wound;
approximating edges of said wound; and

fixing a second lengthwise end of said flexible substrate to said section of tissue on a second lengthwise end of said wound opposite said first lengthwise end of said wound.

41. The method of claim 35, wherein said applying comprises:
placing a quantity of said polymerizable adhesive composition on an exposed side of the flexible substrate; and
spreading the quantity of polymerizable adhesive composition to substantially cover the flexible substrate.
42. The method of claim 35, wherein:
said section of tissue has a length and a width, said length being longer than said width;
said wound has a length and a width, said length being longer than said width;
and said wound extends lengthwise in a lengthwise direction of said section of tissue.